



#9

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SEQUENCE LISTING

<110> RASTELLI, LUCA

<120> NOVEL SPHINGOSINE KINASES AND NUCLEIC ACIDS ENCODING
SAME

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<140> 09/784,810

<141> 2001-02-14

<150> 60/182,360

<151> 2000-02-14

<150> 60/191,261

<151> 2000-03-22

<160> 29

<170> PatentIn Ver. 2.1

<210> 1

<211> 1600

<212> DNA

<213> Homo sapiens

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 <211> 384
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Phe Thr Leu Met Leu Thr Glu Arg Arg Asn His Ala Arg Glu Leu Val
 50 55 60
 Arg Ser Glu Glu Leu Gly Arg Trp Asp Ala Leu Val Val Met Ser Gly
 65 70 75 80
 Asp Gly Leu Met His Glu Val Val Asn Gly Leu Met Glu Arg Pro Asp
 85 90 95
 Trp Glu Thr Ala Ile Gln Lys Pro Leu Cys Ser Leu Pro Ala Gly Ser
 100 105 110
 Gly Asn Ala Leu Ala Ala Ser Leu Asn His Tyr Ala Gly Tyr Glu Gln
 115 120 125
 Val Thr Asn Glu Asp Leu Leu Thr Asn Cys Thr Leu Leu Leu Cys Arg
 130 135 140
 Pro Val Leu Ser Pro Met Asn Leu Leu Ser Leu His Thr Ala Ser Gly
 145 150 155 160
 Leu Arg Ser Phe Ser Val Leu Ser Leu Ala Trp Gly Phe Ile Ala Asp
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 Val Asp Leu Glu Ser Asp Lys Tyr Arg Arg Leu Gly Glu Met Arg Phe
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 Thr Leu Gly Thr Phe Leu Arg Leu Ala Ala Leu Arg Thr Tyr Arg Gly
 195 200 205
 Arg Leu Ala Thr Leu Pro Val Gly Arg Val Gly Phe Lys Thr Pro Ala
 210 215 220
 Ser Pro Val Val Val Gln Gln Gly Pro Val Asp Ala His Leu Val Pro
 225 230 235 240
 Leu Glu Glu Gln Val Pro Ser His Trp Gln Val Val Pro Asp Glu Asp
 245 250 255

Phe Val Leu Val Leu Ala Leu Leu His Ser His Leu Ala Ser Glu Met
260 265 270

Phe Ala Ala Pro Met Gly Arg Cys Ala Ala Gly Val Met His Leu Phe
275 280 285

Tyr Val Arg Ala Gly Val Ser Arg Ala Met Leu Leu Arg Leu Phe Leu
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Ala Met Glu Lys Gly Arg His Met Glu Tyr Glu Cys Pro Tyr Leu Val
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Tyr Val Pro Val Val Ala Phe Arg Leu Glu Pro Lys Asp Gly Lys Gly
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Val Phe Ala Val Asp Gly Glu Leu Met Val Ser Glu Ala Val Gln Gly
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<212> DNA

<213> Mus musculus

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<213> Mus musculus

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35 40 45
Phe Lys Leu Ile Leu Thr Glu Arg Lys Asn His Ala Arg Glu Leu Val
50 55 60
Cys Ala Glu Glu Leu Gly His Trp Asp Ala Leu Ala Val Met Ser Gly
65 70 75 80
Asp Gly Leu Met His Glu Val Val Asn Gly Leu Met Glu Arg Pro Asp
85 90 95
Trp Glu Thr Ala Ile Gln Lys Pro Leu Cys Ser Leu Pro Gly Gly Ser
100 105 110
Gly Asn Ala Leu Ala Ala Ser Val Asn His Tyr Ala Gly Tyr Glu Gln
115 120 125
Val Thr Asn Glu Asp Leu Leu Ile Asn Cys Thr Leu Leu Leu Cys Arg
130 135 140
Arg Arg Leu Ser Pro Met Asn Leu Leu Ser Leu His Thr Ala Ser Gly
145 150 155 160
Leu Arg Leu Tyr Ser Val Leu Ser Leu Ser Trp Gly Phe Val Ala Asp
165 170 175
Val Asp Leu Glu Ser Glu Lys Tyr Arg Arg Leu Gly Glu Ile Arg Phe
180 185 190
Thr Val Gly Thr Phe Phe Arg Leu Ala Ser Leu Arg Ile Tyr Gln Gly
195 200 205
Gln Leu Ala Tyr Leu Pro Val Gly Thr Val Ala Ser Lys Arg Pro Ala
210 215 220
Ser Thr Leu Val Gln Lys Gly Pro Val Asp Thr His Leu Val Pro Leu
225 230 235 240
Glu Glu Pro Val Pro Ser His Trp Thr Val Val Pro Glu Gln Asp Phe

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Val Arg Ala Gly	Val Ser Arg Ala Ala Leu Leu Arg	Leu Phe Leu Ala			
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	325	330	335		
Phe Ser Val Asp	Gly Glu Leu Met Val Cys Glu Ala Val Gln Gly Gln				
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<211> 1840

<212> DNA

<213> Homo sapiens

<400> 5

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<210> 6

<211> 471

<212> PRT

<213> Homo sapiens

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Gln Leu Cys His Leu Trp Leu Gln Thr Leu Arg Glu Met Leu Glu Lys
 35 40 45

Leu Thr Ser Arg Pro Lys His Leu Leu Val Phe Ile Asn Pro Phe Gly
 50 55 60

Gly Lys Gly Gln Gly Lys Arg Ile Tyr Glu Arg Lys Val Ala Pro Leu
 65 70 75 80

Phe Thr Leu Ala Ser Ile Thr Thr Asp Ile Ile Gly Asn Lys Phe Tyr
 85 90 95

Val Asn Tyr Val Glu Val Ile Thr Glu His Ala Asn Gln Ala Lys Glu
 100 105 110

Thr Leu Tyr Glu Ile Asn Ile Asp Lys Tyr Asp Gly Ile Val Cys Val
 115 120 125

Gly Gly Asp Gly Met Phe Ser Glu Val Leu His Gly Leu Ile Gly Arg
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Thr Gln Arg Ser Ala Gly Val Asp Gln Asn His Pro Arg Ala Val Leu
 145 150 155 160

Val Pro Ser Ser Leu Arg Ile Gly Ile Ile Pro Ala Gly Ser Thr Asp
 165 170 175

Cys Val Cys Tyr Ser Thr Val Gly Thr Ser Asp Ala Glu Thr Ser Ala
 180 185 190

Leu His Ile Val Val Gly Asp Ser Leu Ala Met Asp Val Ser Ser Val
 195 200 205

His His Asn Ser Thr Leu Leu Arg Tyr Ser Val Ser Leu Leu Gly Tyr
 210 215 220

Gly Phe Tyr Gly Asp Ile Ile Lys Asp Ser Glu Lys Lys Arg Trp Leu
 225 230 235 240

Gly Leu Ala Arg Tyr Asp Phe Ser Gly Leu Lys Thr Phe Leu Ser His
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 His Cys Tyr Glu Gly Thr Val Ser Phe Leu Pro Ala Gln His Thr Val
 260 265 270
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 Arg Gln Ser Lys Gln Gln Leu Glu Glu Glu Gln Lys Lys Ala Leu Tyr
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 Gly Leu Glu Ala Ala Glu Asp Val Glu Glu Trp Gln Val Val Cys Gly
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 325 330 335
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 340 345 350
 Asp Leu Ile Leu Ile Arg Lys Cys Ser Arg Phe Asn Phe Leu Arg Phe
 355 360 365
 Leu Ile Arg His Thr Asn Gln Gln Asp Gln Phe Asp Phe Thr Phe Val
 370 375 380
 Glu Val Tyr Arg Val Lys Lys Phe Gln Phe Thr Ser Lys His Met Glu
 385 390 395 400
 Asp Glu Asp Ser Asp Leu Lys Glu Gly Gly Lys Lys Arg Phe Gly His
 405 410 415
 Ile Cys Ser Ser His Pro Ser Cys Cys Cys Thr Val Ser Asn Ser Ser
 420 425 430
 Trp Asn Cys Asp Gly Glu Val Leu His Ser Pro Ala Ile Glu Val Arg
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 <213> Rattus sp.

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 <212> PRT
 <213> Rattus sp.

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 35 40 45
 Ile Arg His Thr Asn Gln Glu Asp Gln Phe Gly Phe Thr Phe Val Glu
 50 55 60
 Val Tyr Arg Val Lys Lys Phe Gln Phe Thr Ser Lys His Val Glu Asp
 65 70 75 80
 Asp Asp Asn Asp Leu Lys Glu Leu Glu Lys Gln Lys Phe Gly Gln Ile
 85 90 95
 Cys Lys Asp Asn Pro Pro Cys Ala Cys Pro Thr Ser Arg Ser Ser Trp
 100 105 110
 Asn Cys Asp Gly Glu Val Leu His Ser Pro Ala Ile Glu Val Arg Val
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 His Cys Gln Leu Val Arg Leu Phe Ala Arg Gly Ile Glu Glu Glu Ser
 130 135 140

<210> 9
 <211> 382
 <212> DNA
 <213> Mus musculus

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<213> Mus musculus

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<210> 11

<211> 326

<212> PRT

<213> Homo sapiens

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35 40 45
Glu Val Ile Thr Glu His Ala Asn Gln Ala Lys Glu Thr Leu Tyr Glu
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Ile Asn Ile Asp Lys Tyr Asp Gly Ile Val Cys Val Gly Gly Asp Gly
65 70 75 80
Met Phe Ser Glu Val Leu His Gly Leu Ile Gly Arg Thr Gln Arg Ser
85 90 95
Ala Gly Val Asp Gln Asn His Pro Arg Ala Val Leu Val Pro Ser Ser
100 105 110
Leu Arg Ile Gly Ile Ile Pro Ala Gly Ser Thr Asp Cys Val Cys Tyr
115 120 125
Ser Thr Val Gly Thr Ser Asp Ala Glu Thr Ser Ala Leu His Ile Val
130 135 140
Val Gly Asp Ser Leu Ala Met Asp Val Ser Ser Val His His Asn Ser
145 150 155 160
Thr Leu Leu Arg Tyr Ser Val Ser Leu Leu Gly Tyr Gly Phe Tyr Gly
165 170 175

Asp Ile Ile Lys Asp Ser Glu Lys Lys Arg Trp Leu Gly Leu Ala Arg
 180 185 190
 Tyr Asp Phe Ser Gly Leu Lys Thr Phe Leu Ser His His Cys Tyr Glu
 195 200 205
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 210 215 220
 Asp Arg Lys Pro Cys Arg Ala Gly Cys Phe Val Cys Arg Gln Ser Lys
 225 230 235 240
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 <212> PRT
 <213> *Saccharomyces cerevisiae*

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 Ile Glu Ile Ala Arg Glu Met Asp Ile Asp Lys Tyr Asp Thr Ile Ala
 85 90 95
 Cys Ala Ser Gly Asp Gly Ile Pro His Glu Val Ile Asn Gly Leu Tyr
 100 105 110

Gln Arg Pro Asp His Val Lys Ala Phe Asn Asn Ile Ala Ile Thr Glu
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 130 135 140
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 195 200 205
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 245 250 255
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 260 265 270
 Tyr Glu Thr Glu Asn Glu Asp Glu Asp Glu Asp Ala Asp Ala Asp Asp
 275 280 285
 Glu Asp Ser His Leu Ile Ser Arg Asp Leu Ala Asp Ser Ser Ala Asp
 290 295 300
 Gln Ile Lys Glu Glu Asp Phe Lys Ile Lys Tyr Pro Leu Asp Glu Gly
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 Ile Pro Ser Asp Trp Glu Arg Leu Asp Pro Asn Ile Ser Asn Asn Leu
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 Gly Ile Phe Tyr Thr Gly Lys Met Pro Tyr Val Ala Ala Asp Thr Lys
 340 345 350
 Phe Phe Pro Ala Ala Leu Pro Ser Asp Gly Thr Met Asp Met Val Ile
 355 360 365
 Thr Asp Ala Arg Thr Ser Leu Thr Arg Met Ala Pro Ile Leu Leu Gly
 370 375 380
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 385 390 395 400
 Ile Leu Ala Tyr Lys Ile Ile Pro Lys Leu Gly Asn Gly Leu Phe Ser
 405 410 415

Val Asp Gly Glu Lys Phe Pro Leu Glu Pro Leu Gln Val Glu Ile Met
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Pro Arg Leu Cys Lys Thr Leu Leu Arg Asn Gly Arg Tyr Val Asp Thr
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Asp Phe Asp Ser Met
450

<210> 13

<211> 436

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 13

Leu Leu Ile Asp His Val Ser Arg Lys Ser Arg Ala Asn Thr Gly Glu
1 5 10 15

Glu Asn Ile Ser Ser Gly Thr Val Glu Glu Ile Leu Glu Lys Ser Tyr
20 25 30

Glu Asn Ser Lys Arg Asn Arg Ser Ile Leu Val Ile Ile Asn Pro His
35 40 45

Gly Gly Lys Gly Thr Ala Lys Asn Leu Phe Leu Thr Lys Ala Arg Pro
50 55 60

Ile Leu Val Glu Ser Gly Cys Lys Ile Glu Ile Ala Tyr Thr Lys Tyr
65 70 75 80

Ala Arg His Ala Ile Asp Ile Ala Lys Asp Leu Asp Ile Ser Lys Tyr
85 90 95

Asp Thr Ile Ala Cys Ala Ser Gly Asp Gly Ile Pro Tyr Glu Val Ile
100 105 110

Asn Gly Leu Tyr Arg Arg Pro Asp Arg Val Asp Ala Phe Asn Lys Leu
115 120 125

Ala Val Thr Gln Leu Pro Cys Gly Ser Gly Asn Ala Met Ser Ile Ser
130 135 140

Cys His Trp Thr Asn Asn Pro Ser Tyr Ala Ala Leu Cys Leu Val Lys
145 150 155 160

Ser Ile Glu Thr Arg Ile Asp Leu Met Cys Cys Ser Gln Pro Ser Tyr
165 170 175

Met Asn Glu Trp Pro Arg Leu Ser Phe Leu Ser Gln Thr Tyr Gly Val
180 185 190

Ile Ala Glu Ser Asp Ile Asn Thr Glu Phe Ile Arg Trp Met Gly Pro
195 200 205

Val Arg Phe Asn Leu Gly Val Ala Phe Asn Ile Ile Gln Gly Lys Lys
210 215 220

Tyr Pro Cys Glu Val Phe Val Lys Tyr Ala Ala Lys Ser Lys Lys Glu
 225 230 235 240
 Leu Lys Val His Phe Leu Glu Asn Lys Asp Lys Asn Lys Gly Cys Leu
 245 250 255
 Thr Phe Glu Pro Asn Pro Ser Pro Asn Ser Ser Pro Asp Leu Leu Ser
 260 265 270
 Lys Asn Asn Ile Asn Asn Ser Thr Lys Asp Glu Leu Ser Pro Asn Phe
 275 280 285
 Leu Asn Glu Asp Asn Phe Lys Leu Lys Tyr Pro Met Thr Glu Pro Val
 290 295 300
 Pro Arg Asp Trp Glu Lys Met Asp Ser Glu Leu Thr Asp Asn Leu Thr
 305 310 315 320
 Ile Phe Tyr Thr Gly Lys Met Pro Tyr Ile Ala Lys Asp Thr Lys Phe
 325 330 335
 Phe Pro Ala Ala Leu Pro Ala Asp Gly Thr Ile Asp Leu Val Ile Thr
 340 345 350
 Asp Ala Arg Ile Pro Val Thr Arg Met Thr Pro Ile Leu Leu Ser Leu
 355 360 365
 Asp Lys Gly Ser His Val Leu Glu Pro Glu Val Ile His Ser Lys Ile
 370 375 380
 Leu Ala Tyr Lys Ile Ile Pro Lys Val Glu Ser Gly Leu Phe Ser Val
 385 390 395 400
 Asp Gly Glu Lys Phe Pro Leu Glu Pro Leu Gln Val Glu Ile Met Pro
 405 410 415
 Met Leu Cys Lys Thr Leu Leu Arg Asn Gly Arg Tyr Ile Asp Thr Glu
 420 425 430
 Phe Glu Ser Met
 435

<210> 14
 <211> 380
 <212> PRT
 <213> Schizosaccharomyces pombe

<400> 14
 Cys Trp Val Asp Phe Val Glu Asn Ser Asp Gln Phe Cys Glu Tyr Leu
 1 5 10 15
 Leu Asp Val Ala Tyr Lys Gly Ile Lys Arg Ser Arg Arg Phe Ile Val
 20 25 30
 Phe Ile Asn Pro His Gly Gly Lys Gly Lys Ala Lys His Ile Trp Glu
 35 40 45

Ser Glu Ala Glu Pro Val Phe Ser Ser Ala His Ser Ile Cys Glu Val
 50 55 60
 Val Leu Thr Arg Arg Lys Asp His Ala Lys Ser Ile Ala Lys Asn Leu
 65 70 75 80
 Asp Val Gly Ser Tyr Asp Gly Ile Leu Ser Val Gly Gly Asp Gly Leu
 85 90 95
 Phe His Glu Val Ile Asn Gly Leu Gly Glu Arg Asp Asp Tyr Leu Glu
 100 105 110
 Ala Phe Lys Leu Pro Val Cys Met Ile Pro Gly Gly Ser Gly Asn Ala
 115 120 125
 Phe Ser Tyr Asn Ala Thr Gly Gln Leu Lys Pro Ala Leu Thr Ala Leu
 130 135 140
 Glu Ile Leu Lys Gly Arg Pro Thr Ser Phe Asp Leu Met Thr Phe Glu
 145 150 155 160
 Gln Lys Gly Lys Lys Ala Tyr Ser Phe Leu Thr Ala Asn Tyr Gly Ile
 165 170 175
 Ile Ala Asp Cys Asp Ile Gly Thr Glu Asn Trp Arg Phe Met Gly Glu
 180 185 190
 Asn Arg Ala Tyr Leu Gly Phe Phe Leu Arg Leu Phe Gln Lys Pro Asp
 195 200 205
 Trp Lys Cys Ser Ile Glu Met Asp Val Val Ser Ser Asp Arg Thr Glu
 210 215 220
 Ile Lys His Met Tyr Glu Lys Ser Lys Asn Leu Ala Pro Met Ser Glu
 225 230 235 240
 Ser Ser Asp Ser Asp Lys Thr Val Ser Thr Ser Pro Glu Ser His Leu
 245 250 255
 Leu Thr Phe Glu Ile Asn Asp Leu Ser Ile Phe Cys Ala Gly Leu Leu
 260 265 270
 Pro Tyr Ile Ala Pro Asp Ala Lys Met Phe Pro Ala Ala Ser Asn Asp
 275 280 285
 Asp Gly Leu Ile Asp Val Val Ile Val Tyr Ser Lys Gln Phe Arg Lys
 290 295 300
 Ser Leu Leu Ser Met Phe Thr Gln Leu Asp Asn Gly Gly Phe Tyr Tyr
 305 310 315 320
 Ser Lys His Leu Asn Tyr Tyr Lys Val Arg Ser Phe Arg Phe Thr Pro
 325 330 335
 Val Asn Thr Gly Lys Arg His Tyr Phe Ala Leu Asp Gly Glu Ser Tyr
 340 345 350
 Pro Leu Glu Pro Phe Glu Cys Arg Val Ala Pro Lys Leu Gly Thr Thr

355 360 365
 Leu Ser Pro Val Ala Gly Phe Gln Leu Leu Asp Ile
 370 375 380

 <210> 15
 <211> 415
 <212> PRT
 <213> Caenorhabditis elegans

 <400> 15
 Cys Arg Ser Asp Ala Glu Glu Asn Glu Gln Leu Thr Ser Val Ile Leu
 1 5 10 15
 Ser Arg Lys Pro Pro Pro Gln Glu Gln Cys Arg Gly Asn Leu Leu Val
 20 25 30
 Phe Ile Asn Pro Asn Ser Gly Thr Gly Lys Ser Leu Glu Thr Phe Ala
 35 40 45
 Asn Thr Val Gly Pro Lys Leu Asp Lys Ser Leu Ile Arg Tyr Glu Val
 50 55 60
 Val Val Thr Thr Gly Pro Asn His Ala Arg Asn Val Leu Met Thr Lys
 65 70 75 80
 Ala Asp Leu Gly Lys Phe Asn Gly Val Leu Ile Leu Ser Gly Asp Gly
 85 90 95
 Leu Val Phe Glu Ala Leu Asn Gly Ile Leu Cys Arg Glu Asp Ala Phe
 100 105 110
 Arg Ile Phe Pro Thr Leu Pro Ile Gly Ile Val Pro Ser Gly Ser Gly
 115 120 125
 Asn Gly Leu Leu Cys Ser Val Leu Ser Lys Tyr Gly Thr Lys Met Asn
 130 135 140
 Glu Lys Ser Val Met Glu Arg Ala Leu Glu Ile Ala Thr Ser Pro Thr
 145 150 155 160
 Ala Lys Ala Glu Ser Val Ala Leu Tyr Ser Val Lys Thr Asp Asn Gln
 165 170 175
 Ser Tyr Ala Ser Phe Leu Ser Ile Gly Trp Gly Leu Met Ala Asp Ile
 180 185 190
 Asp Ile Asp Ser Glu Lys Trp Arg Lys Ser Leu Gly His His Arg Phe
 195 200 205
 Thr Val Met Gly Phe Ile Arg Ser Cys Asn Leu Arg Ser Tyr Lys Gly
 210 215 220
 Arg Leu Thr Tyr Arg Pro Tyr Lys Pro Lys Gly Phe His Pro Ser Ser
 225 230 235 240
 Asn Val Phe Ser Val Tyr Glu Lys Thr Thr Gln Gln Arg Ile Asp Asp

	245		250		255
Ser Lys Val	Lys Thr Asn Gly Ser Val Ser Asp Ser Glu Glu Glu Thr				
	260		265		270
Met Glu Thr	Lys Phe Gln Asn Trp Thr Leu Pro Asp Ser Asp Glu Thr				
	275		280		285
Leu Ala Val	Gly Ser Ser Asp Leu Glu Glu Thr Val Val Ile Glu Asp				
	290		295		300
Asn Phe Val	Asn Ile Tyr Ala Val Thr Leu Ser His Ile Ala Ala Asp				
	305		310		315
Gly Pro Phe	Ala Pro Ser Ala Lys Leu Glu Asp Asn Arg Ile His Leu				
		325		330	335
Ser Tyr Ile	Leu Trp Lys Asp Ile Gly Thr Arg Val Asn Ile Ala Lys				
	340		345		350
Tyr Leu Leu	Ala Ile Glu His Glu Thr His Leu Asp Leu Pro Phe Val				
	355		360		365
Lys His Val	Glu Val Ser Ser Met Lys Leu Glu Val Ile Ser Glu Gly				
	370		375		380
Ser His Val	Val Leu Asp Gly Glu Val Val Asp Thr Lys Thr Ile Glu				
	385		390		395
Val Ala Ser	Thr Lys Asn His Ile Ser Val Phe Ser Ser Thr Ala				
		405		410	415

<210> 16
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Illustrative motif

<400> 16
 Asn Glu Gln Lys
 1

<210> 17
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Illustrative motif

<400> 17
 Asn His Gln Lys

1

<210> 18
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative
motif

<400> 18
Asn Asp Glu Gln
1

<210> 19
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative
motif

<400> 19
Gln His Arg Lys
1

<210> 20
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative
motif

<400> 20
Met Ile Leu Val
1

<210> 21
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative
motif

<400> 21
Met Ile Leu Phe
1

<210> 22
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 22
Ser Thr Asn Lys
1

<210> 23
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 23
Ser Thr Pro Ala
1

<210> 24
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 24
Ser Gly Asn Asp
1

<210> 25
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 25
Ser Asn Asp Glu Gln Lys
1 5

<210> 26

<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 26
Asn Asp Glu Gln His Lys
1 5

<210> 27
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 27
Asn Glu Gln His Arg Lys
1 5

<210> 28
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative motif

<400> 28
Val Leu Ile Met
1

<210> 29
<211> 132
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: 80432911

<400> 29
Ala Gly Ala Pro Gly Ala Asp Ala Cys Ser Val Pro Val Ser Glu Ile
1 5 10 15
Ile Ala Val Glu Glu Thr Asp Val His Gly Lys His Gln Gly Ser Gly
20 25 30
Lys Trp Gln Lys Met Glu Lys Pro Tyr Ala Phe Thr Val His Cys Val
35 40 45

